

# Anti-epidemic measures in the outbreak

*Repressive anti-epidemic measures* are taken if **the disease has already occurred**. We also call them *anti-epidemic measures in the outbreak*, with the **outbreak being the source and its immediate surroundings**. These measures are:

- **Early and correct diagnosis of the disease** – is a basic prerequisite for initiating rapid and effective repressive measures. This includes a *proper epidemiological anamnesis, clinical examination* and *laboratory examination* (microbiological, serological, biochemical, etc.)
- **Reporting of patients and suspects of infection** – immediately after diagnosis or suspicion of infectious disease, the *doctor who examined the patient first reports to the epidemiological department of the territorially competent medical institution* by sending the appropriate form, in case of highly contagious diseases or in case of epidemic they report directly to the ministry of healthcare.
- **Patient isolation** – is any separation of patients, carriers and convalescents in order to prevent any transmission of the disease to susceptible individuals. The method is determined *by the attending physician or epidemiologist*.
- **Epidemiological investigation in the outbreak** – is carried out immediately (preferably as an interview with the patient), the extent of the outbreak is defined by place and time. The source of the infection and other potentially infected people must be traced; basic data on patients and their contacts and data (age, sex, onset of illness, residence, profession, etc.) are collected to develop epidemic curves and to express a working hypothesis about the source and the route of transmission.

## Anti-epidemic regime

It is a set of measures that we take **in the outbreak in order to eradicate it as soon as possible**, it consists of:

- **active search for infected** and suspected infections (possible sources),
- **quarantine measures** for suspects **in the form of medical surveillance** (regular *examination* and *observation* during the incubation since the last case), *increased medical surveillance* (in addition to monitoring, also prohibition of certain risky activities), *quarantine* (isolation in the sense defined by WHO; **cholera, plague, yellow fever**),
- **focal disinfection**, *ongoing* – around the patient during the period of EA (etiologic agent); *final* – after the transport or death of the patient,
- **active and passive immunization** according to circumstances,
- **chemoprophylaxis** especially ATB or antimalarials,
- **control of basic hygiene measures**, such as *drinking water supply, food, waste disposal, wastewater disposal*,
- **health education** is an instruction for people with disabilities and endangered about appropriate behavior.
- **Monitoring and evaluation of anti-epidemic measures** – performed and evaluated daily by an **epidemiologist**, possibly supplemented or changed according to the situation. The effectiveness of the measures is assessed from the health and economic point of view.

Measures *must be* **feasible, easy to implement, understandable** and **effective**.

## Epidemiological surveillance

It represents **a comprehensive and systematic acquisition of all the available information about the occurrence of a certain disease** or health disorder in the population and at the same time a **study of all conditions and factors** that affect the development and occurrence of the given disease.

It includes long-term comprehensive programs in which experts from various medical (epidemiology, microbiology, hygiene, clinic) and non-medical (statistics, veterinary medicine, ecology) disciplines collaborate, with the epidemiologist being usually the one who is in charge.

*Surveillance* takes place in *3 consecutive stages*:

1. **obtaining the necessary data** – number of patients, deaths, information on infectious agents, clinical information, monitoring of vaccination and collective immunity, monitoring of animal diseases in zoonoses, data on vectors,
2. **analysis of the collected data** – evaluation of information and proposals for measures, during long-term surveillance it is also possible to make a prognosis of the occurrence of the disease in the near future,
3. **providing qualified information** for all field workers to improve their own performance.

Surveillance can be performed on various large areas, **they are usually performed on the territory of an entire country** (in the Czech Republic poliomyelitis, pertussis, diphtheria, measles, viral hepatitis, foodborne infections, influenza).

# Links

## Related articles

- Preventive anti-epidemic measures

## References

- GEIZEROVÁ, H.. *Epidemiologie – vybrané kapitoly pro seminární a praktická cvičení*. 1.. edition. Praha : Karolinum, 1995. 83 pp. pp. 65-67. ISBN 80-7184-179-X.